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Discussion: <Chronology of western Pyrenean Paleolithic cave art: A critical examination> by Blanca Ochoa and Marcos García-Díez

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ABSTRACT

In a recent paper by Ochoa and García-Díez (2013) the available evidences for a chronology of western Pyrenean Paleolithic cave art are critically analyzed and discussed, and an alternative chronological organization is proposed on the basis of stylistic comparison. In this paper we discuss the critics made to the immediate context dating proposals in Altxerri B, Askondo and Etxeberrri by giving the detailed information that has been recently published (Garate and Rios-Garaizar, 2012; Garate et al., 2012; González-Sainz et al., 2013). We also discuss the validity of the stylistic comparisons proposed by Ochoa and García-Díez (2013) for the Gravettian and the Magdalenian art. Finally we discuss the problems for establishing a reliable chronological framework for Paleolithic rock art in this area.

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1. Introduction

Establishing the chronology of rock art is a crucial aspect to assess important topics such as the origins of artistic expression, the evolutionary trends of Paleolithic art or the relationship between art and more mundane archaeological evidence. Recently, several dating methods have been proposed and/or updated (Style, 14C, U/Th, TL, etc.), each one with its own problems and limits. Nowadays, all of them remain under discussion and intense debate (for example: Pettitt and Bahn, 2003; Valladas and Clottes, 2003; Alcolea González and Balbín Behrmann, 2007; Pettit and Pike, 2007; Combier and Jouvé, 2012; Clottes, 2012; Pons-Branchu et al., 2014).

The paper presented by Ochoa and García-Díez reviews the chronological attributions for rock art sets from the Western Pyrenean Region. To do so, they criticize the different direct and indirect dating systems used by previous researchers, to conclude that many of them are based on erroneous assumptions and therefore are not valid. Finally the authors propose an alternative chronological order based mainly on stylistic comparisons to understand “the evolution of cave art in this area” (Ochoa and García-Díez, 2015: 2).

We coincide partially with the diagnosis expressed by the authors, that is, the chronological framework available for this region is rather incomplete, problematic and further works must be done in order to improve it, but we disagree with them in two critical points.

First, the context related dating in the region has provided important data to chronologically contextualize some of the main rock art sites in the area such as Altxerri B, Askondo and Etxeberrri. In Ochoa's and García-Díez's paper these evidence is criticized without taking into account all the recently published information (Garate and Rios-Garaizar, 2012; Garate et al., 2012; González-Sainz et al., 2013).

Secondly, the use of a comparative stylistic approach could be an interesting exercise to strengthen or complete the chronological framework in this region. Nevertheless, it must be made with the largest sample possible, using statistically significant analyses and not simply subjective comparisons (Fritz et al., 2007). We also have doubts about the validity of the sample of portable art used to establish the stylistic features of Western Pyrenean Gravettian art, as well as with some of the criteria used for characterizing Magdalenian art.

2. Context related dating

Ochoa and García-Díez mention the possibility of using the immediate archaeological context to date cave art. They also

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enumerate some conditions that are necessary to "... be certain that there is a clear relationship between the archaeological strata and the artistic activity". Precisely: "the relationship between the art and its spatial and archaeological context is established on the basis of a clear material link-i.e. pigments (ochre, manganese, charcoal) used for art and spilled into archaeological strata; objects (bones, shells, stones) used to contain or prepare such pigments for use; or tools recovered from archaeological strata demonstrably used to create engravings" (Ochoa and García-Díez, 2015: 2). In general we agree with these criteria, although we consider that a deeper discussion about the validity of immediate context information is absolutely necessary.

In the paper by Ochoa and García-Díez all the immediate dated contexts, recently published are invalidated because, in their opinion, they do not fulfill these criteria. However, in several recently published articles we have described thoroughly these sites and context and these criteria are in fact fulfilled.

2.1. Altxerri B

Ochoa and García-Díez (2015: 3) say that "The dates obtained in the immediate context of Altxerri cannot therefore be used to date the cave's artistic activities". They claim that "a meaningful relationship between the two (*artistic panel and dated bones*) cannot be demonstrated". Some precisions should be made, first of all the dated bones were not "recovered from the cave's floor close to its collapsed original access" as Ochoa and García-Díez (2015: 3) say, but "beneath the Main Panel" (González-Sainz et al., 2013: 460), which is not even in the same chamber than the collapsed entrance (2013: Fig. 2). Moreover, the recovered bones come from a surface immediately next to the Main Panel were they were found in clear association with burnt bones, charcoal and ochre fragments (which are not even mentioned by Ochoa and García-Díez). The association of these archaeological remains (including the dated bones) with the Main Panel are based on the intimate proximity, on the absence of other archaeological deposits on the cave and on the geological features of the cave, including the collapsed area of the entrance. The combination of all these elements points towards the contemporaneity between the archaeological remains and rock art (González-Sainz et al., 2013). Moreover the presence of ochre fragments, given that the paintings were made in red, links these remains to artistic activities. Consequently this would fulfill the requirements expressed by Ochoa and García-Díez (2015: 3). Thus, the dates obtained from the bones in Altxerri B can be considered a good proxy to assess the chronology of the Main Panel. Also in the paper by González-Sainz et al. (2013), the stylistic and thematic connections between Altxerri B and other Aurignacian manifestations such as Chauvet rock-art or Swabian region portable art were precisely established and discussed. "Paradoxically" the stylistic and thematic association to Aurignacian art coincides with the dates obtained from the bone remains below the Main Panel.

2.2. Etxeberri

In this case, Ochoa and García-Díez state that "the problem as in the cases discussed above, resides in the issue as to whether there is a genuine connection between the artistic activity and the dated samples" (2014: 8). In 2012 we described the immediate archaeological context of the "Salle des Peintures" excavated in detail in a 50 × 50 cm test situated less than 50 cm from the decorated panel of right wall. In this excavation we identified a single archaeological level of 2 cm deep where we found ochre fragments and powder, an ochre stained wall fragment, several fragments of burnt bone, some lithic remains and a fragment of *Littorina obtusata* shell. This clearly fulfills the requirements expressed by Ochoa and García-Díez

(2015: 2) to accept the link between art and immediate context. Moreover, in this specific case, the rock art is found in the deepest part of a long cave, with many difficulties for accessing the decorated panels, which also accounts for the contemporaneity of rock art and the archaeological record from the "Salle des Peintures". Furthermore, Ochoa and García-Díez (2015: 8) discuss the available 14C dates arguing that there is a "divergence of ages between the burnt bones and the shell sample", suggesting that there were "two phases of activity in this area of the cave". In the paper by Garate et al. (2012) this apparent divergence is discussed and several arguments are given for a more cautionary view of the shell date, among them the reservoir effect of shells and the long-term life of artifacts made of shell (Garate et al., 2012: 647). In any case, for Etxeberri, also 'paradoxically', the chronological attribution of rock art based on stylistic parallels clearly coincides with the estimated age of the archaeological context.

2.3. Askondo

In the case of Askondo we are facing a different problem. In the monograph published in 2012 (Garate and Rios-Garaizar, 2012) we meticulously described the rock-art and the archaeological context. In this case, we dated by AMS 14C a bone fragment nailed in the same wall where a hand stencil and several others paintings were found, at a distance of 3 m from the rock art and 2 m above the cave floor. The result was 23.760 ± 110 BP (Beta-303671, 28.055–27.621 OxcalBP). This has been described by Ochoa and García-Díez (2015) as an immediate archaeological context when it must be described as another kind of symbolic expression, which usually is closely related to cave art as has been demonstrated in several rock art sites (Peyroux, 2012). Moreover, in the test excavation carried out 1 m away from this decorated panel, we revealed a long stratigraphy, where level 5, displayed the optimal conditions for human presence (the cave was dry), and the optimal conditions for art execution (height distance of 1,6–2 m to the paints). This level has not been directly dated but the overlying level 4 has been dated in 17.490 ± 90 BP (Beta-316473, 21.434–20.838 OxcalBP) and the underlying level 8 in 25.450 ± 110 BP (Beta-320949, 29.921–29.170 OxcalBP), bracketing clearly the date obtained from the nailed bone. This does not mean that this is the exact date of the paintings, but it defines a scenario of symbolic activity and human presence in the cave which is probably related with rock art. In this case, also 'paradoxically', the stylistic features of the Askondo depictions are highly coherent and coincide with Gravettian rock art found across Western Europe. In fact, this attribution is accepted by Ochoa and García-Díez due to the presence of a positive hand stencil which "have a prolonged chronology from at least the Aurignacian through most or all the Gravettian" (2014: 6). In a recent paper by one of the authors different immediate context dates for hand stencils in Fuente del Salin and Gargas are considered valid (García-Díez and Garrido, 2012). The most striking example is Gargas cave. In this site, a bone nailed into a fissure close to one hand stencil was dated to 26.860 ± 460 BP (Gif A 92369, 31.713–29.950 OxcalBP) (Clottes et al., 1992). The similarities with Askondo are clear but, while for Gargas they accept a "close relationship between the dated bone and the intense human activity around the decorated space" (García-Díez and Garrido, 2012: 497, original in Spanish), in the case of Askondo this possibility is rejected.

3. The comparative stylistic basis

The formal stylistic comparison is described in the paper by Ochoa and García-Díez as the "most commonly employed relative dating method" which proposes that "similar artistic styles should be broadly synchronic" allowing the identification of "specific

stylistic series (phases)” which “can be assigned to broad chronological periods” (Ochoa and García-Díez, 2015: 2).

This approach is used to describe the “first figurative art” in the region which is assigned to the Gravettian “based on comparison of parietal art with the only five pieces of Iberian portable art that clearly depict figures that have been found in consistent stratigraphic contexts” (Ochoa and García-Díez, 2015: 6).

The authors maintain that these portable art pieces have been found in “consistent stratigraphic contexts”. This can be true for Antoliñako Koba, but it is more dubious for Castillo, Morín, Parpalló or Mallaetes. For example the piece from Castillo cave was found during Obermaier’s excavations (1910–1914) and the authors themselves, in another article (García-Díez and Ochoa, 2012: 605), mention the possible admixture with Solutrean levels citing the revision of the stratigraphic sequence carried out by Cabrera (1984). The piece from Morín comes from an undated level (4) interpreted as Late Gravettian, which overlays a layer (5a) dated by conventional 14C to 20.710 ± 350 BP (SI-953, 25.734–24.130 OxcalBP) (Maíllo-Fernández et al., 2001), in this case the stratigraphic sequence is correct but the cultural attribution to the Gravettian period is dubious. Finally, the examples from Mallaetes and Parpalló, present questionable comparative samples as they came from old excavations with diverse problems in the definition of its stratigraphy (see García-Díez and Ochoa, 2012: 609; De la Peña, 2013).

Aside from these facts, there are also some doubts about their affirmation that these pieces are representatives of Gravettian portable art. The Castillo figure has been interpreted as a feline by the main specialist in cantabrian portable art (Barandiaran, 1972, 1994; Corchón, 1986, 2004), but the authors consider, without further discussion, that the depicted figure is a bison (García-Díez and Ochoa, 2012: 607). This ambiguity reduces its value as a comparative sample. The piece from Morín has a non-conventional representation with no clear parallels in rock art. Finally the figure from Mallaetes and the two from Parpalló are indistinguishable from the large number of pieces found in the Solutrean levels of Parpalló (Villaverde, 2005: 24).

Therefore, this comparative sample is composed only by six incomplete depictions, and some of them with interpretation problems. With this basis Ochoa and García-Díez establish their canon for pre-Magdalenian art, which is described as “simple, represented only by the outline, without anatomical details, out of proportion and inarticulate connections between body and extremities” (Ochoa and García-Díez, 2015: 9).

Moreover, the selection of the comparison samples seems quite incomplete. The authors only choose to select sites from the Iberian Peninsula, including Mallaetes and Parpalló which are more than 600 km far away from the Western Pyrenees, in a clearly distinct cultural environment, while they forget or decide not to include sites such as Isturitz, situated in the heart of their study region, with about a dozen of engraved animals published by the middle of the twentieth century (Passemar, 1944; Saint-Périer and Saint-Périer, 1952), or Gargas, less than 100 km to the East, from where 3 figures were published by the same time (Breuil, 1953).

If we take into consideration the portable art representations found in these sites, the stylistic features that define pre-Magdalenian art differ considerably from the proposal made by Ochoa and García-Díez. Considering the sample of more than 50 animal figures that have been recently discovered and re-analyzed from Isturitz portable art (Rivero and Garate, 2014), these are characterized by a high degree of detail, the careful representation of the anatomical features and by the connections between body and extremities. Therefore, the canonic features used by Ochoa and García-Díez to characterize the pre-Magdalenian art are not extensible to most of the pre-Magdalenian figures, and what is even more problematic, it does not exclude great part of Magdalenian representations.

Furthermore, the authors propose a chronological organization for Magdalenian rock-art. In this case, the style of bison representations and the presence of small claviform depictions are the basis for establishing a Middle-Upper Magdalenian art style.

Regarding the bison representations, Ochoa and García-Díez speak about a “pyrenean style” (2015: 8), defined by vague criteria such as the “curved inflexion of the outline” or the “flexed limb joints”. This definition is based on subjective observations without any statistical basis and does not take into account a recent paper by Fortea et al. (2004). In this article the existence of two major types of bison depictions during the Magdalenian, Pyrenean style and Dordogne style, is demonstrated after a complex statistical analysis that takes into consideration numerous formal features.

Finally, the consideration of claviform symbols as a stylistic marker for Magdalenian art in this region is problematic. The authors defend that these signs have been found in “Lumentxa, Alt-xerri, Sinhikole, Sainte Colome (Tastet), Etxeberri, Oxocelhaya, Erberua and the deep areas of Cullalvera cave” (Ochoa and García-Díez 2015: 8). Some of us have conducted the study or review of most of these caves and no small claviform sign have never been found in these sites with the exception of Cullalvera. This situation obviously invalidates the use of these signs as stylistic markers.

4. Discussion

Establishing a good chronological framework for the development of Paleolithic rock-art in the Western Pyrenean region is a fundamental task for the improvement of the knowledge of Paleolithic human presence in this region, but, at the same time it is a complex endeavour. The idea that this goal can be achieved exclusively through numeric dating is an “unattainable goal that defies the physical laws on which our universe is based” (Bailey, 2007: 206). Nowadays the difficulties for directly dating the artistic events are very important. Available numeric dating methods offer enormous difficulties for its application and for the interpretation of the results. Moreover, with the exception of 14C dates obtained from charcoals and even in this case with some reserves, other available methods, such as U/Th, only date the artistic events indirectly. For this reason we should not deny the relevance of dates obtained from related context.

Contextual relationships are the basis of archaeological interpretation. Even a date obtained from a specific figure is extended to other figures in the same panel, same cave, or same region because there is a contextual relationship (proximity, stylistic/thematic/technical similarities, etc.). Therefore, what is relevant is to evaluate the degree of contemporaneity, which at the end is “... an arbitrary concept” (Bailey, 2007: 206). For the cases of Alt-xerri B, Askondo and Etxeberri enough arguments have been exposed to accept, the contemporaneity of rock-art and dates obtained from the immediate archaeological context and from other symbolic expressions. If we consider this information, the chronological organization of rock-art in this region (see Garate et al., 2015) varies considerably from the schema published by Ochoa and García-Díez (2015).

Furthermore, chronological inferences made from stylistic comparisons should be based on samples that are representative and big enough to allow a statistic approach. The use of discrete traits or small comparative samples is a risky exercise that can lead to confusion when we compared with other sources of data (Lorblanchet and Bahn, 1993).

5. Conclusion

To be able to define the chronology of rock art of the Western Pyrenean region we should take in account, critically, all the

available information, and more efforts should be made for the discovery and documentation of new rock-art sites, which are improving significantly our knowledge about rock-art and Paleolithic societies (Garate et al., 2012). Furthermore, more efforts in the application and improvement of numerical dating should also be carried out, without forgetting that these are not free of archaeological interpretation. Stylistic comparisons as a method for identifying artistic phases should also be pursued, but always taking into consideration the complexity of this approach. Finally, the importance of archaeological contexts related with rock-art should not be ignored, not only for the chronological definition of rock art, but also for a better understanding of the role of rock art in Paleolithic societies.

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